



OpenAMI

Tuesday, February 1, 2005

The Value of Open Standards for AMI and Demand Response

Ray Bell
CTO, Silver Spring Networks
ray@silverspringnet.com

- Leverage the Advanced Metering Infrastructure to:
 - Ensure reliable delivery of energy services
 - At a fair and equitable price, and
 - Empowers customers to make smart choices
- Ensure that the physical infrastructure will not be quickly obsoleted by evolving requirements — guarantee the new AMI meters last at least fifteen-twenty years
 - Technology specified & implemented must be open and extensible
 - Systems must be based on standards, and require vendor interoperability
 - Timely delivery of accurate load monitoring & control information – voltage, frequency, harmonics
 - Automated end-to-end load control/shedding capabilities – down to customer premise decision points
 - Customer access to current purchase price & service bill-to-date at point of sale – dynamic pricing
 - Flexible rate structures & service programs designed to meet consumer needs at reasonable costs

What is Required?

Demand Response & AMI Infrastructure

- Demand Response & AMI Infrastructure implementations **MUST** adhere to a common open standards-based reference design
- The reference design must provide a **MINIMUM** base functionality and standard interfaces to an underlying common data/information model
- The **REFERENCE DESIGN** must provide a clean way to extend base functionality to include additional higher levels of functionality, that may be seen as:
 - revenue generators for the utilities (ex, home billing)
 - services to the end customer (load monitoring and control)
 - mandated additional base functionality as the CPUC may dictate in the future (e.g. UFLS)
- The extensibility should adhere again to **OPEN STANDARDS-BASED** interfaces
 - fostering heterogeneous solutions with vendor interoperability
 - providing a path to allow myriad third party vendors to compete
 - enabling new and innovative solutions to emerge

What does this mean for me?

The Value of the AMI Reference Design

- **Customers:**

- Interoperable Products (Meters, Networks, Systems)
- Heterogeneous Network Mediums (Wireless, PLC, BPL, etc...)
- Energy Information & Control Services to the Customer Premise (Retail Markets)
- Increased Functionality at Lower Prices (Innovation, Competition)
- Sustainable Product Migration (Tomorrow will never come, unless you start today...)
- Better Value for Shareholders and Customers alike

- **Vendors:**

- Ensure the Near-term Deployment of Major AMI Build-outs
- Provide Product / Solution Clarity through a Common Approach
- Increase the Overall Size of the Available Market

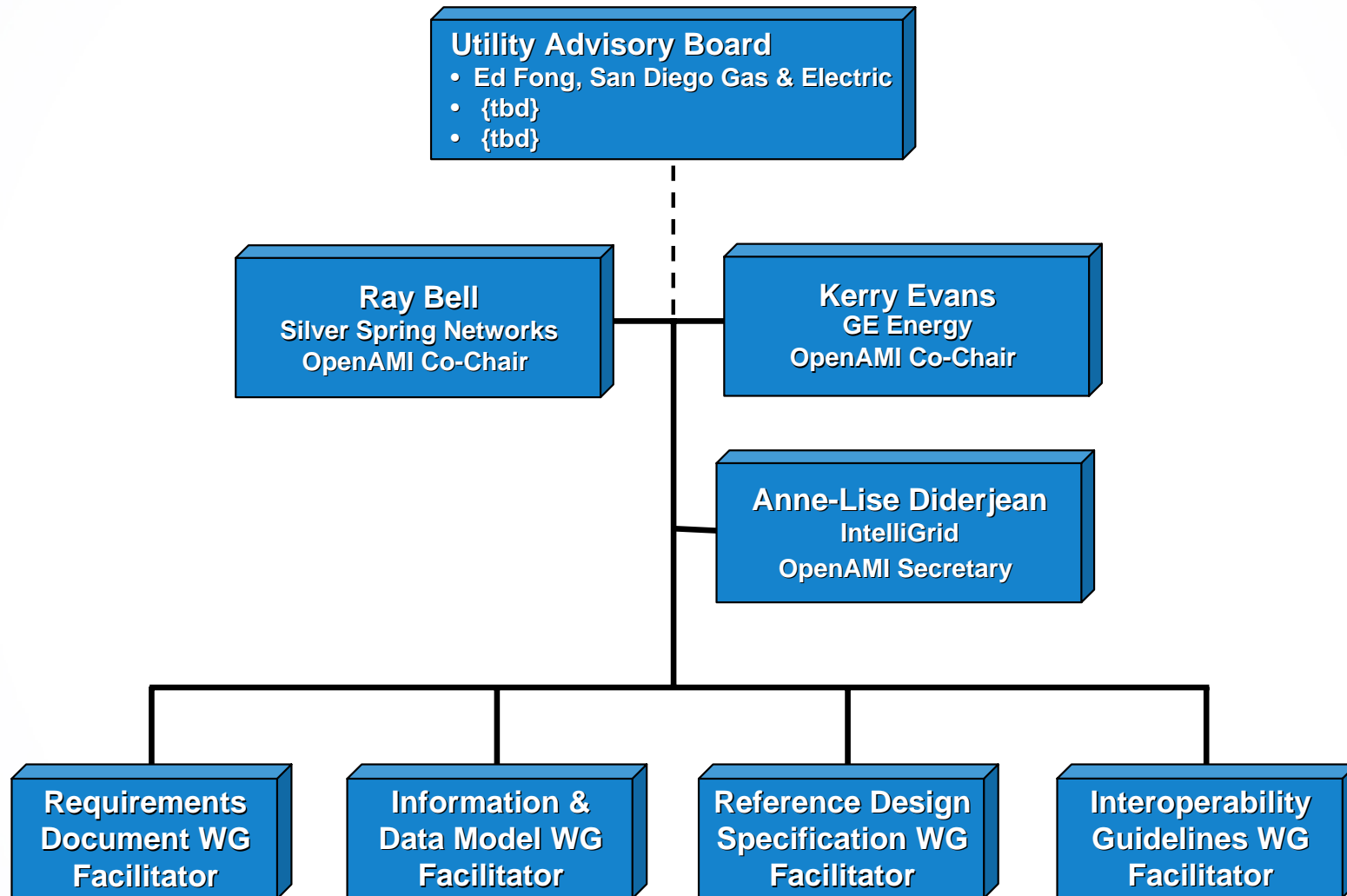
Mission Statement

- Foster enhanced functionality, lower costs and rapid customer adoption of Advanced Metering networks and Demand Response solutions through the development of a recommended open, standards-based information/data model, reference design and interoperability guidelines

Objectives

- Facilitate the broad adoption of advanced metering and demand response
- Define what 'open standards' means for advanced metering and demand response
- Diminish technical and functional risk concerns for utilities, regulators and rate-payers
- Empower consumers with tools to better understand and manage their energy use
- Foster industry innovation, efficiency and lower cost solutions

OpenAMI Task Force Structure



OpenAMI Task Force

Milestones / Key Dates

- ✓ 01/19/05 – Public Announcement of OpenAMI Task Force
- ✓ 01/26/05 – Organizational Meeting @ DistribuTech, San Diego
- 02/01/05 – Presenting at CA CEC Public Workshop on Demand Response
- 02/02/05 – 1st Working Session in Sacramento
- 03/07/05 – Requirements WG Draft Specifications Due
- 04/07/05 – 2nd Working Session in Atlanta
- 05/09/05 – Information/Data Model WG Draft Specifications Due
- 06/06/05 – Reference Design WG Draft Specifications Due
- 07/11/05 – Interoperability Guidelines WG Draft Specifications Due
- 08/08/05 – 3rd Working Session in San Francisco
- 09/30/05 – Final OpenAMI Specification Drafts posted
- 12/16/05 – OpenAMI Specifications submitted to umbrella standards body

- Membership is open to anyone (individual or organization) who shares in the vision of the OpenAMI Mission & Objectives
 - Membership in UCAug is encouraged but not required
- Next OpenAMI Meeting
 - 02/02/05 – 1st Working Session in Sacramento
- To Join the OpenAMI Task Force or to get More Information please visit:

www.openami.org

Charter Members

